

**National Transportation Safety Board
Office of Surface Transportation Safety
Washington, D.C. 20594**

**Hazardous Materials-Security Group Chairman's
Factual Report of Investigation
January 17, 1997**

A. Accident

Operator: Trans World Airlines, Inc.
Aircraft: Boeing 747-131, N93119, Flt. No. 800
Location: East Moriches, Long Island, New York
Date: July 17, 1996
NTSB No.: DCA96MA070

B. Hazardous Materials-Security Group Members

Tom Lasseigne NTSB-Accident Investigator
Pipeline and Hazardous Materials Division
Washington, DC

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C. Summary

On July 17, 1996, around 2031 EDT, Trans World Airlines Inc. (TWA) Flight 800, a Boeing 747-131, N93119, operating as a regularly scheduled international passenger and cargo flight from John F. Kennedy International Airport, Jamaica, New York to Charles De Gaulle International Airport, Paris, France crashed into the Atlantic Ocean about 8 miles south of East Moriches, Long Island, New York. There were 212 passengers and 18 crew members on board, no one survived. The aircraft was destroyed.

D. Details of the Investigation

1.0 Background/Scope

On September 20, 1996, an investigation of the FAA K-9 explosives detection program was undertaken after trace amounts of explosive residues were found on the interior surfaces of the cabin and cargo areas of N93119 and following disclosure that an FAA K-9 explosives

detection team at Lambert-St. Louis International Airport had used this aircraft for training. On June 10, 1996, a dog handler on the K-9 explosives detection team had placed explosives on the aircraft to conduct a proficiency training exercise, and during this exercise explosive materials were released in the aircraft.

This investigation focused on FAA K-9 explosives detection program requirements for preventing contamination of aircraft and airport facilities and to ensure a reliable K-9 explosives detection program. This included reviewing procedures for handling, transporting and placing explosive training aids on board aircraft prior to scheduled flights.

Because many of the referenced documents contain sensitive security information, release of this information is subject to the provisions of *14 CFR 191. Protection of Sensitive Security Information*. Therefore, many of the referenced documents could not be copied, retained or otherwise publicly disclosed. Additionally, review of this report was coordinated with the FAA - Office of Civil Aviation Security Operations.

2.0 Sequence of Events

2.1 June 10, 1996 K-9 Training Exercise¹.

Around 9:30 am² on June 10, 1996, a St. Louis Airport Police Officer, who is assigned to the K-9 Explosives Detection Team as a Dog Handler, contacted the local TWA Manager on Duty and requested access to an aircraft during layover to conduct K-9 proficiency training. The TWA Manager reportedly advised that there was a 747 aircraft available at Gate 50, but the Captain wants the aircraft to be ready for service by 11:30 am.

Around 10:15 am, the officer went to the airport explosives bunker and removed four containers that were routinely used for storing the explosive training aids. A fifth explosive container had been previously placed inside the police officer's vehicle.

Around 10:25 am, the officer accompanied by the FAA K-9 drove through the airport operations area (AOA) to TWA Gate 50. After he boarded N93119 and determined that there

¹ On September 22, 1996, group members interviewed personnel from the St. Louis International Airport Police Department K-9 Unit, Bureau of Support Operations, i.e. K-9 Trainer, Handler and Supervisor.

² All times included herein are local, St. Louis, MO - Central Daylight Time.

was no one on board the aircraft, the officer placed the five explosive containers on the serving counter in the galley near the **R1** exit.

Because the officer was alone throughout the proficiency exercise, he made two trips from the aircraft to his vehicle in order to place all five of the explosive containers on board. Similarly, in order to remove the explosive containers when he was completed, the Dog Handler made two trips from the aircraft to his vehicle.

Around 10:45 am the officer began placing the individual explosive training aids throughout the forward section of the cabin. The officer placed a training aid in the center armrest compartment separating **Seat 1 and Seat 2 on Row 2**. The officer stated that while he handled the training aid he may have spilled a small amount inside the seat compartment between the seats. The officer stated that he could not distinctly determine how much explosive material was spilled.

Around 11:00 am, the officer next returned to the galley, removed the second training aid and placed it in a small closet at the rear of the upper deck of the aircraft. Next the officer returned to the galley and retrieved a third training aid and placed it at **Seat 9, Row 10**, inside the rear pouch of the seatback. Then he returned to the galley, removed the fourth training aid and placed it in the overhead compartment, above **Seats 1 and 2 on Row 20**. Finally, the officer removed the fifth training aid and placed it beside exit door, **R3**.

The Dog Handler stated that the St. Louis K-9 Team had received military explosive training aids in 1994 from the FAA and that over a period of several years of continuous use one of the training aids became cracked at 1-inch intervals along its entire length. Reportedly, the training aid had released small amounts of explosive ingredients whenever it was removed from storage container. The officer stated that over a couple years he estimated that more than 50% of its explosive ingredients had been lost.

After waiting in the front section of the cabin until around 11:15 am (for approximately 15 minutes in order for the explosive training aids "to set" and imprint their odors throughout the immediate area), the officer retrieved the FAA-K9 from his vehicle and returned to the aircraft. The officer stated that the proficiency exercise was successful in that the dog located all of the training aids within a 15-minute period. The officer next returned the FAA K-9 to the police vehicle, picked up all the training aids and returned the training aids to their respective storage containers.

By 11:30 am the training session was completed and all of the explosives were secured. The officer stated that everything was taken from the aircraft to his police vehicle and he checked each explosive container to ensure that the contents were in tact. The officer made two separate trips to remove the explosives from the aircraft. The officer stated that throughout the entire exercise he never saw anyone while he was at Gate 50 or onboard the aircraft. Once he was completed, the officer left without notifying anyone at TWA that the exercise had been concluded.

The officer stated that throughout the entire proficiency exercise his activities were limited to the front half of the cabin. i.e. the K9 Team never went beyond Row 30, the aft section of the aircraft or inside the lower cargo deck.

2.2 August 26 thru Sept 19, 1996.

Following an August 23, 1996 public announcement that explosive traces were found on TWA Flight 800 wreckage, the FAA Explosives Unit developed plans to determine if FAA K-9's had conducted proficiency exercises onboard "any TWA 747's during the previous six months".

On August 26, 1996 key Federal investigative agencies were briefed on FAA plans and by August 28, 1996, TWA had identified all airports where N93119 had been on the ground for at least 4 hours during the period from January to July, 1996.

On August 29, 1996 FAA began checking K-9 training records at these airports to determine if FAA K-9s were involved. On Sept 5, the FAA St. Louis Security Office discovered that a local K-9 Unit had conducted training on board a TWA 747. The St. Louis K-9 Unit had conducted an explosive exercise on June 10, 1996 and this data was incomplete in that an aircraft tail number was not provided.

On September 18, 1996 the FAA Explosives Unit requested the FAA St. Louis office to obtain the trail number of the aircraft involved in the June 10, 1996 proficiency training exercise at St. Louis-Lambert Airport. After comparing the proficiency training records³ with the TWA flight resume and aircraft maintenance records at St. Louis, the FAA St. Louis office was able to determine that N93119 had been used in the June 10, 1996 proficiency exercise. On September

³ The K-9 proficiency training records also contained information as to the time the proficiency exercise was conducted and gate number used by the aircraft at St. Louis Airport.

19, 1996 key Federal investigative agencies were advised that a K-9 proficiency training exercise was conducted onboard N93119.

3.0 K-9 Explosives Detection Program

3.1 Lambert - St. Louis Airport Procedures

During proficiency training exercises, the K9 Trainer normally accompanies the K9 Handler. The K9 Trainer oversees the handling and placement of the explosive training aids and works together with the K9 Handler to make sure that all the explosive training aids are secured. However, on June 10, 1996 the K9 Trainer was on vacation and the K9 Handler conducted the proficiency exercise without the K9 Trainer.

The K9 Trainer is also assigned the responsibility to complete a monthly form verifying types and amounts of military and commercial explosives in the explosives storage bunker at the St. Louis Airport. Rather than use a "daily log" at the explosives bunker to sign explosives in and out, the explosives log sheet is up dated on a monthly basis. Review of these forms indicates that the month to month inventory was up to date and all explosive items were accountable.

At St. Louis International Airport, the last major explosive exchange of FAA provided explosive training aids was in June, 1994. The military explosives were replaced by FAA personnel and hand receipts/documentation were provided to St. Louis Airport Police. Commercial explosives used for training are exchanged with a local supplier.

Presently, St. Louis Airport has modified their proficiency training to include documentation of tail numbers of aircraft involved in proficiency training exercises and daily logging of explosives in their bunker.

3.2 FAA Oversight

Managed by the FAA Office of Civil Aviation Security Operations, the FAA K-9 Explosives Detection Team Program was created in 1972 as an innovative means to provide trained, certified explosives detection K-9 teams to respond to threats against civil aviation. Almost 25 years later, participation in this program has grown from 20 locations with 40 teams to over 30 location with more than 100 teams. Participants are law enforcement agencies and

airport authorities throughout the country, who enter into an agreement with the FAA to provide this vital service.

Recently, the White House Commission on Aviation Safety and Security placed a renewed emphasis on the importance of explosives detection K-9 teams at our nation's airports. Congress showed its support for these detection K-9 teams throughout the Omnibus Consolidated Appropriations Act of 1997 (Public Law 104-208), which provides for the expansion of the FAA K-9 program to even more locations throughout the country.

Through interagency coordination⁴ between the Department of Defense, FAA and local law enforcement agencies at various public airports, the FAA-procured K-9's remain the property of the FAA and are used exclusively under FAA authority. The dogs are assigned to cities on a priority basis which is based on the needs of the program as determined by the FAA National Program Manager. Currently, the FAA K-9 handler's are trained by a DoD military working dog school.


Tom Lasseigne



⁴ Under Letter of Agreement, responsibilities and mandatory requirements are established for each local law enforcement entity or airport authority for participation in the Federal Aviation Administration K-9 Explosives Detection Team Program.

D. LIST OF KEY REFERENCES⁵

The following is a list of documents reviewed by the members of the Hazardous Materials-Security Group:

1. Interview on September 23, 1996: Officer Herman Burnett (K-9 Handler), St. Louis International Airport Police Department, Bureau of Support Operations. *Deleted due to security requirements as contained in 14 CFR 191.*
2. Interview on September 23, 1996: Sergeant David Whitecotton (K-9 Trainer St. Louis International Airport Police Department, Bureau of Support Operations. *Deleted due to security requirements as contained in 14 CFR 191.*
3. Interview on September 23, 1996: Captain Paul Mason, St. Louis International Airport Police Department, Bureau of Support Operations. *Deleted due to security requirements as contained in 14 CFR 191.*
4. Interview on September 23, 1996: Linda Sabol, Supervisor FAA CASFU and Samuel Renfrew, Federal Security Manager, Lambert-St. Louis International Airport. *Deleted due to security requirements as contained in 14 CFR 191.*
5. Interview on September 24, 1996: Ed Kittel, FAA Aviation Explosives Unit Specialist on site at Morriches, Long Island; and Chronology of FAA K-9 Detection Team's Use of TWA Flight 800 Aircraft (93119). *Deleted due to security requirements as contained in 14 CFR 191.*
6. Annual Evaluation for the K9 Team on July 22, 1996 at St. Louis Airport. *Deleted due to security requirements as contained in 14 CFR 191.*
7. St. Louis Airport Police Department K-9 Unit, Canine Explosives/Narcotics Training Record, June 10, 1996. *Deleted due to security requirements as contained in 14 CFR 191.*
8. St. Louis Airport Police Department K-9 Unit, "Records for Dog" (Computer-generated sheet). *Deleted due to security requirements as contained in 14 CFR 191.*

⁵Because many of the referenced documents contain sensitive security information, release of this information is subject to the provisions of 14 CFR 191, *Protection of Sensitive Security Information*. Therefore, many of the referenced documents could not be copied, retained or otherwise publicly disclosed.

9. Military Explosive Material Inventory, St. Louis Airport K-9 Unit (contains records from Army EOD unit and from FAA explosives change-out on June 19, 1996). *Deleted due to security requirements as contained in 14 CFR 191.*
10. Explosive Material Inventory (K-9 Unit), September 3, 1996. *Deleted due to security requirements as contained in 14 CFR 191.*
11. Diagram of 747-100 layout: location of training aids planted on June 10, 1996. *Deleted due to security requirements as contained in 14 CFR 191.*
12. CC:mail message, August 28, 1996 from Mary Carol Turano to the field reference: if any proficiency training was conducted by teams in the FAA K-9 Explosives Detection Team Program on any TWA 747s during past 6 months.
13. CC:mail message, September 4, 1996 from Ed Kittel to the field, reference: List of airports visited by N93119 since January 1, 1996.
14. St. Louis Airport Police Department K-9 Unit, "Records for Dog" (Computer-generated sheet). *Deleted due to security requirements as contained in 14 CFR 191.*
15. Information faxed to Ed Kittel, Larry Gallatin, and Roy McClain, dated September 19, reference TWA 747's on ground June 10 (includes fax confirmation sheet, St. Louis Airport Police Department K-9 Unit, "Records for Dog" (computer-generated sheet). *Deleted due to security requirements as contained in 14 CFR 191.*
16. Memo from L. Sabol, September 21, 1996 in reference to Events during Tracking N93119.
17. Verification of receipt of Incident of FAA/Military Explosives (June 12, 1996). *Deleted due to security requirements as contained in 14 CFR 191.*
18. Standard Practice and Procedures to Minimize Cross-Contamination of Explosive Materials. *Deleted due to security requirements as contained in 14 CFR 191.*
19. Letter of Compliance in reference to St. Louis Airport Explosives Storage Bunker. *Deleted due to security requirements as contained in 14 CFR 191.*
20. May 1, 1996 Letter in reference to Military Explosives Change-out Update. *Deleted due to security requirements as contained in 14 CFR 191.*

21. Letter of Agreement: K9 Explosives Detection Team Program. *Deleted due to security requirements as contained in 14 CFR 191.*